

Appl. No. 09/676,620
Amendment dated April 14, 2004
Reply to Office Action dated March 22, 2004

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) An heptanoic acid antimicrobial composition comprising:
in the range of 0.01 to 5 wt. % of an antimicrobial component consisting essentially of heptanoic acid; and
greater than 60 wt. % of a freezing point depressant component comprising propylene glycol and glycerin.
- 2-5. (canceled)
6. (previously presented) The antimicrobial composition of claim 1, wherein the freezing point depressant component consists of a mixture of propylene glycol and glycerin.
7. (original) The antimicrobial composition of claim 1, wherein the composition has a freezing point of below 32°F.
8. (original) The antimicrobial composition of claim 1, wherein the composition has a freezing point of below 20°F.
9. (original) The antimicrobial composition of claim 1, wherein the composition has a freezing point of below 10°F.
10. (original) The antimicrobial composition of claim 1, wherein the composition has a freezing point of below 0°F.
11. (original) The antimicrobial composition of claim 1, wherein the composition has a freezing point of below -10°F.

Appl. No. 09/676,620
Amendment dated April 14, 2004
Reply to Office Action dated March 22, 2004

12. (original) The antimicrobial composition of claim 1, wherein the composition has a freezing point of below -20°F.

14. (original) The antimicrobial composition of claim 1, wherein the freezing point depressant component makes up greater than 65 wt. % of the total composition.

15. (original) The antimicrobial composition of claim 1, wherein the freezing point depressant component makes up greater than 70 wt. % of the total composition.

16. (original) The antimicrobial composition of claim 1, wherein the freezing point depressant component makes up greater than 75 wt. % of the total composition.

17-18. (canceled)

19. (currently amended) A method for controlling mastitis in milk producing animals, the method comprising:

applying an heptanoic acid antimicrobial composition to a teat of an animal, wherein the heptanoic acid antimicrobial composition comprises:

in the range of 0.01 to 5 wt. % of an antimicrobial component consisting essentially of heptanoic acid; and

greater than 60 wt. % of a freezing point depressant component comprising propylene glycol and glycerin.

20. (original) The method of claim 19, wherein the antimicrobial composition is applied in environmental temperatures of below 40°F or is applied to the teat of an animal that will be exposed to environmental temperatures of below 40°F within 12 hours of the application.

Appl. No. 09/676,620
Amendment dated April 14, 2004
Reply to Office Action dated March 22, 2004

21. (previously presented) The method of claim 20, wherein the environmental temperatures are below 30°F.

22. (previously presented) The method of claim 20, wherein the environmental temperatures are below 20°F.

23. (previously presented) The method of claim 20, wherein the environmental temperatures are below 10°F.

24-27. (canceled)

28. (previously presented) The method of claim 19, wherein, wherein the freezing point depressant component consists of a mixture of propylene glycol and glycerin.

29. (original) The method of claim 19, wherein the composition has a freezing point of below 32°F.

30. (original) The method of claim 19, wherein the composition has a freezing point of below 20°F.

31. (original) The method of claim 19, wherein the composition has a freezing point of below 10°F.

32. (original) The method of claim 19, wherein the composition has a freezing point of below 0°F.

33. (original) The method of claim 19, wherein the composition has a freezing point of below -10°F.

Appl. No. 09/676,620
Amendment dated April 14, 2004
Reply to Office Action dated March 22, 2004

34. (original) The method of claim 19, wherein the composition has a freezing point of below -20°F.

35. (original) The method of claim 19, wherein the freezing point depressant component makes up greater than 65 wt. % of the total composition.

36. (original) The method of claim 19, wherein the freezing point depressant component makes up greater than 70 wt. % of the total composition.

37. (original) The method of claim 19, wherein the freezing point depressant component makes up greater than 75 wt. % of the total composition.

38. (previously presented) The antimicrobial composition of claim 1, wherein the freezing point depressant component consists essentially of a mixture of propylene glycol and glycerin.

39. (currently amended) The method of claim 19, wherein, wherein the freezing point depressant component consists essentially of a mixture of propylene glycol and glycerin.

40. (new) The antimicrobial composition of claim 1, wherein the antimicrobial component consists of heptanoic acid.

41. (new) The method of claim 19, wherein the antimicrobial component consists of heptanoic acid.

42. (new) The antimicrobial composition of claim 1, further comprising rheology modifier, lanolin, surfactant, sequestrant, or mixture thereof.

Appl. No. 09/676,620
Amendment dated April 14, 2004
Reply to Office Action dated March 22, 2004

43. (new) The method of claim 19, wherein the composition further comprises rheology modifier, lanolin, surfactant, sequestrant, or mixture thereof.